

What is claimed is:

1. A High-speed Digital Subscriber Line (HDSL) communication device, comprising:
  - a HDSL communication interface;
  - an upstream communication interface;
  - a communication circuit coupled to the HDSL communication interface and the upstream communication interface;
  - a bit error rate test (BERT) circuit coupled to the communication circuit; and
  - a processor coupled to the communication circuit and the BERT circuit, wherein the processor commands the BERT circuit to initiate a bit error rate (BER) test.
2. The HDSL communication device of claim 1, wherein the HDSL communication device further comprises:
  - a machine-readable storage media coupled to the processor, where the processor utilizes BER firmware stored on the machine-readable storage media to operate the BERT circuit.
3. The HDSL communication device of claim 1, wherein the HDSL communication device further comprises:
  - a craft port coupled to the processor, wherein a BER test is initiated by the processor by a command from the craft port.
4. The HDSL communication device of claim 1, wherein the HDSL communication interface contains an embedded operation channel (EOC), such that command signals may be expressed on the EOC by the HDSL communication device.
5. The HDSL communication device of claim 4, wherein the EOC command signal is a loopback configuration command signal.
6. The HDSL communication device of claim 1, wherein the upstream communication interface contains an embedded operation channel (EOC), such that

command signals may be expressed on the EOC by the HDSL communication device.

7. The HDSL communication device of claim 6, wherein the EOC command is a loopback configuration command.
8. The HDSL communication device of claim 1, wherein the communication link is coupled to a T1 communication interface of the HDSL communication device.
9. The HDSL communication device of claim 1, wherein a test pattern is generated and compared by the bit error rate test (BERT) circuit coupled to the HDSL communication device.
10. The HDSL communication device of claim 1, wherein a digital signal 1 (DS1) loss event error is masked by the HDSL communication device.
11. The HDSL communication device of claim 1, wherein the BER test is initiated on the HDSL communication interface.
12. The HDSL communication device of claim 1, wherein the BER test is initiated on the upstream communication interface.
13. A communication system, comprising:  
a first and a second High-speed Digital Subscriber Line (HDSL) communication device, each HDSL communication device having a HDSL interface and at least one other communication interface;  
a HDSL communication link coupled to the HDSL interface of the first HDSL communication device and to the HDSL interface of the second HDSL communication device, wherein the first HDSL communication device initiates a bit error rate (BER) test on the HDSL communication link and locally masks all alarms until the BER test is complete.

14. The communication system of claim 13, wherein the first HDSL communication device expresses a loopback command signal on the HDSL communication link.

15. The communication system of claim 13, wherein the first HDSL communication device further comprises:  
a machine usable storage media coupled to a processor, where the processor controls BER test with firmware from the machine usable storage media.

16. A method of operating a communications system, comprising:  
initializing a Bit Error Rate (BER) test across a communication link coupled between a first and a second High-speed Digital Subscriber Line (HDSL) communication device;  
masking errors locally in the first HDSL communications device until completion of the BER test;  
sending a test pattern signal through the communication link from the first HDSL communication device to the second HDSL communication device;  
receiving a return signal from the second HDSL communication device at the first HDSL communication device; and  
comparing the test pattern signal with the received return signal on the first HDSL communication device to determine a bit error rate.

17. The method of claim 16, further comprising:  
setting the second HDSL communication device into loopback mode.

18. The method of claim 16, further comprising:  
sending a loopback configuration command to the second HDSL communications device over an embedded operation channel (EOC).

19. The method of claim 16, wherein BER routines are stored on a machine readable storage medium coupled to the first HDSL communication device.

20. The method of claim 16, wherein the test pattern is generated and compared by an integrated bit error rate test (BERT) circuit coupled to the first HDSL communication device.

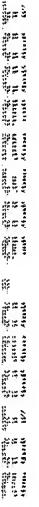
21. The method of claim 16, wherein a digital signal 1 (DS1) loss event error is masked by the first HDSL communication device.

22. A method of operating a communications system, comprising:  
initializing a Bit Error Rate (BER) test across a communication link coupled between a first and a second High-speed Digital Subscriber Line (HDSL) communication device;  
sending a test pattern signal through the communication link from the first HDSL communication device to the second HDSL communication device;  
receiving a return signal from the second HDSL communication device to the first HDSL communication device;  
comparing the test pattern signal with the received return signal on the first HDSL communication device to determine a bit error rate; and  
masking errors at the second HDSL communications device until completion of the BER test.

23. The method of claim 22, further comprising:  
sending a loopback configuration command to the second HDSL communications device over an embedded operation channel (EOC).

24. The method of claim 23, wherein the EOC command to the second HDSL communications device is an error mask command.

25. The method of claim 23, wherein the EOC command to the second HDSL communications device is an alarm mask command.



26. The method of claim 22, wherein BER routines are stored on a machine readable storage medium coupled to the first HDSL communication device.
27. The method of claim 22, wherein the test pattern is generated and compared by an integrated bit error rate test (BERT) circuit coupled to the first HDSL communication device.
28. The method of claim 22, wherein a DS1 loss event error is masked by the second HDSL communication device.
29. A method of operating a High-speed Digital Subscriber Line (HDSL) communication device, comprising:
  - initializing a Bit Error Rate (BER) test across a communication link coupled to the HDSL communication device;
  - sending a test pattern signal through the communication link;
  - receiving a return signal;
  - comparing the test pattern signal with the received return signal to determine a bit error rate; and
  - masking errors locally in the HDSL communications device until completion of the BER test.
30. The method of claim 29, further comprising:
  - setting a second communication device that is coupled to the communication link into loopback mode.
31. The method of claim 30, wherein the second communication device is a HDSL communication device.
32. The method of claim 30, further comprising:
  - sending a loopback configuration command to the second communications device over an embedded operation channel (EOC).

33. The method of claim 29, wherein BER routines are stored on a machine readable storage medium coupled to the HDSL communication device.

34. The method of claim 29, wherein the communication link is coupled to a HDSL communication interface of the HDSL communication device.

35. The method of claim 29, wherein the communication link is coupled to a T1 communication interface of the HDSL communication device.

36. The method of claim 29, wherein the test pattern is generated and compared by an integrated bit error rate test (BERT) circuit coupled to the HDSL communication device.

37. The method of claim 29, wherein a DS1 loss event error is masked by the HDSL communication device.

38. A method of operating a High-speed Digital Subscriber Line (HDSL) communication device, comprising:  
initializing a Bit Error Rate (BER) test across a communication link coupled to the HDSL communication device to a second HDSL communications device;  
sending a test pattern signal though the communication link;  
receiving a return signal;  
comparing the test pattern signal with received return signal to determine a bit error rate; and  
masking errors in the second HDSL communications device until completion of the BER test.

39. The method of claim 38, further comprising:  
expressing a command on an embedded operation channel (EOC) to the second HDSL communications device.

40. The method of claim 39, wherein the EOC command to the second HDSL communications device is a loopback configuration command.

41. The method of claim 39, wherein the EOC command to the second HDSL communications device is an error mask command.

42. The method of claim 39, wherein the EOC command to the second HDSL communications device is an alarm mask command.

43. The method of claim 38, wherein BER routines are stored on a machine readable storage medium coupled to the HDSL communication device.

44. The method of claim 38, wherein the test pattern is generated and compared by an integrated bit error rate test (BERT) circuit coupled to the HDSL communication device.

45. The method of claim 38, wherein a DS1 loss event error is masked by the second HDSL communication device.

46. A method of operating a communication device, comprising:  
initializing a Bit Error Rate (BER) test across a communication link coupled to the communication device;  
sending a test pattern signal through the communication link;  
receiving a return signal;  
comparing the test pattern signal with received return signal to determine a bit error rate; and  
masking errors locally in the communications device until completion of the BER test.

47. The method of claim 46, further comprising:  
setting a second communication device that is coupled to the communication link  
into loopback mode.

48. The method of claim 47, wherein the second communication device is a HDSL  
communication device.

49. The method of claim 47, further comprising:  
sending a command to the second communications device over an embedded  
operation channel (EOC).

50. The method of claim 49, wherein the EOC command to the second  
communications device is a loopback configuration command.

51. A method of operating a communication device, comprising:  
initializing a Bit Error Rate (BER) test across a communication link coupled to the  
communication device to a second communications device;  
sending a test pattern signal though the communication link;  
receiving a return signal;  
comparing the test pattern signal with received return signal to determine a bit error  
rate; and  
masking errors in the second communications device until completion of the BER  
test.

52. The method of claim 51, further comprising:  
sending a command to the second communications device over an embedded  
operation channel (EOC).

53. The method of claim 52, wherein the EOC command to the second  
communications device is a loopback configuration command.

54. The method of claim 52, wherein the EOC command to the second communications device is an error mask command.

55. A machine-readable medium having machine-readable instructions stored thereon for execution by a processor of a communication device to perform a method comprising:

initializing a Bit Error Rate (BER) test across a communication link coupled to the communication device;

sending a test pattern signal through the communication link;

receiving a return signal;

comparing the test pattern signal with received return signal to determine a bit error rate; and

masking errors locally in the communications device until completion of the BER test.